Kerigan, A.T., Goldsmith, C.H., Pengelly, L.D. "A Three-Year Cohort Study of the Role of Environmental Factors in the Respiratory Health of Children in Hamilton, Ontario" American Review of Respiratory Disease 133: 987-993, 1986.

SUMMARY: The relative importance of the effect of outdoor environmental factors (suspended particulates, sulphur dioxide) and indoor environmental factors (parental smoking, gas cooking) on the respiratory health of children is still unclear. To answer these questions, a 3-yr cohort analytic study has been conducted in Hamilton, Ontario between 1978 and 1981. The prevalence of respiratory symptoms and indoor environmental factors was determined by an interviewer-administered questionnaire. Pulmonary function measures included both the forced expiratory maneuver and the single- and multiple-breath nitrogen washouts. Outdoor air quality was measured by a comprehensive network of suspended particulate and sulphur dioxide monitors. There were 3,345 children 7 to 10 yr of age studied in the first year; a response rate of 95.4%, 3,727 in the second year, and 3,168 in the third year; 75.6% of the initial cohort were studied in both Year 2 and Year 3. Comprehensive quality control in the study included measurement of the repeatability of both the questionnaire and pulmonary function data. Repeatability was acceptable except for variables derived from the single-breath nitrogen washout (correlation between initial and repeat closing volume vital cpapcity was 0.14). Cigarette smoking in Year 3 was reported in 4.8% of the children. The distribution of other covariables was not uniform, and the prevalence of parental smoking and gas cooking was greatest in the industrial area with the highest particulate pollution. Future analysis of these data will require the effect of these covariables to be distinguished from that caused by outdoor air pollution.

2023510237

Source: https://www.industrydocuments.ucsf.edu/docs/szyx0000